

PIU Networks Scoping Note

EME Distribution Perspectives

Background

1 The PIU paper is factually based, well structured and covers most of the important issues. We concur with the view that there needs to be a distinction between the security of the different sources of energy and the reliability and robustness of the delivery mechanisms. If consumers require a long-term reliable supply of electricity this will require an increased level of network investment.

2 The option to increase the proportion of electricity obtained from renewable sources will also require a growth in the capacity of generation embedded in Distribution networks. The scoping work co-ordinated by the DTI/ Ofgem working group has shown that the move to a more active network is likely to require a significant capital investment over a prolonged period of time. Opening up this option requires action now and in the next price review. Supporting investment in the network infrastructure should be viewed as an option payment, which brings potential environmental, security and economic benefits.

Natural Monopolies

3 From an economic and social perspective we believe that these networks should remain natural monopolies. This obviously does not preclude competition for services within these monopolies or the development of comparators and incentives which reward good network performance and penalise poor performance.

4 There is also a continuing role for these networks in facilitating the development of further competition in the liberalised gas and electricity markets. Negotiated third party access is probably more applicable where flows are in one direction and excess capacity is being used in a predictable manner. Once significant security requirements exist with the need to meet significant system peaks and flows are more than one way, then common carriage becomes more applicable. Clearly, if there are capacity constraints, there need to be well developed rules for effecting system balancing.

5 The paper rightly points to the inability to store electricity and the need to match generation to load on a minute by minute basis . The role of the system operator is key in effecting this matching. Currently local electricity Distribution networks do not require a proactive system operator, but as network flows become more dynamic and two way, the role of local system operators will grow.

Distribution Networks

6 Connections to Distribution networks do require judgements over the level of reinforcement required which reflect the particular network characteristics. These judgements are however made within the context of well-established and transparent frameworks. In response to Ofgem consultations on NETA and the Structure of Charges EME has previously indicated its willingness to take on a bounded risk from firmer connections in return for the potential to earn additional rewards. This would clearly move Generator connection to distribution networks closer towards common carriage.

We concur that the regulatory framework for generator connection to local networks needs to be reviewed, but distributors also need to be incentivised to take extra risk within a Utilities Act framework which can be seen as discouraging risk taking.

Key Issues

7 Within reason network charges should be differentiated for costs incurred in providing the service. One of the key issues is the strength of the locational signal, which is socially and economically acceptable particularly for domestic consumers. The stronger the locational signal the greater the need for economic accuracy. In electricity the supplier hub concept is well established and the economic signal is passed through the supplier. Distribution use of system charges are just one part of a wider supply charge, which would potentially reflect a number of different supplier strategies. The spirals and time lags involved in such locational signals could also be difficult to manage. Over-response to signals might also be a problem particularly with long lived assets with the potential for significant stranding of viable assets. Such locational signals might also tend to increase the number of worse served customers in rural areas.

8 We concur with the view that weather conditions can lead to very significant year on year variation in performance, as last year's events showed. EME have suggested the use of appropriate performance deadbands to mitigate this effect. Within a European Union context we do not support the view that ownership of networks by companies based outside the UK will exacerbate the risk of short-term profit taking. The risk of stranded assets is however real and failure to address this issue will have serious consequences. Unless the regulator is willing to allow returns which support equity involvement, equity will exit the sector and financial institutions will become the asset owners.

9 Information asymmetry in the networks sector is now significantly diminished. Requirements from the Information and Incentives Project and revised regulatory accounting guidelines have contributed to this diminution. It can be argued that the reverse is now true and that the regulator, by introducing a plurality of comparators and de-linked comparisons of opex, capex and performance, has created new and greater asymmetry. If long term and sustainable outcomes are required from the next price review greater clarity of regulatory objective and process will be required.

10 Ofgem's advocacy of more market-based instruments would be more persuasive if it was supported by rigorous cost benefit analysis and the transparent use of regulatory impact assessments. Until such time as these methodologies are consistently and transparently applied significant doubts will remain about the applicability of these particular market mechanisms for long term investment. The danger of getting market signals wrong is reflected in Anna Walker's quote that "an economist's lag is a politician's nightmare" in the context of the recent disruptions in California.

11 We concur with the view that the balance of network charges has tended to favour producers in Scotland and Northern England to greater extent than warranted by variations in cost.

Embedded and Renewables

12 We support the recommendations of the Joint Government Industry Working Group on Embedded Generation that Ofgem should:

- review the structure of regulatory incentives on Distribution Network operators;
- that a group should be established under Government leadership to drive forward the group's recommendations;
- that embedded generation should be able to access the network on fair and transparent terms.

13 In our view current renewable technology is not necessarily the lowest cost energy option particularly in the short term. However, against the whole range of Government energy policy objectives, there is a much more convincing argument for opening up the renewable option for the future. The cost benefit analysis therefore needs to focus on how that strategic renewables option can most effectively be opened up.

14 The joint industry report has started to identify the key problems associated with embedded generation. Within the framework of a very tight price control, Distribution network operators capex and opex programmes are fully committed to delivering the current tough performance deliverables. Driving any new embedded deliverables is likely to have some opportunity cost. On the technical front ancillary services, network design and operation and P2/5 design standards will need to be addressed. Charging principles will probably be at the heart of any real progress on embedded generation. Currently they are deep connections with no DUOS but this will probably need to move to shallow or shallowish connections to get real momentum in the process. To be effective such a change will need to be properly funded and future regulatory treatment of any long lived network assets will need to be addressed.

15 The other issue is information provision, which has already been addressed to some extent by the long-term development statement. The identification of connection points is likely to be of more value in remote areas. The longer-term vision of a more active distribution network will take a number of years to mature, with a number of phases of development. Success from a network perspective will be to open up the option whereas wider policy objectives will determine the scale and extent to which the option is exploited. Regulation needs to recognise this distinction in order to provide the appropriate incentives for investment. Developing options to manage future uncertainty is never a cost free exercise, but in this case appears to be justified. In a NETA context EME was willing to consider bounded risk reward options and we would support a similar approach to developing the embedded option.

Security

16 Simple economics suggests that security is most cost effectively dealt with through scale and scope rather than at the individual consumer level. The danger of significant oscillation in consumer behaviour also suggests that further encouragement may be counterproductive.

Regulatory Approach

17 EME has developed a sophisticated approach to asset and risk management as part of its drive to achieve world class standards in distribution. As a result it is at or near the limits of achievable operating and capital investment efficiencies for a network of its size. There is limited further scope for cost savings.

18 RPI - X price regulation has been highly effective in encouraging efficiency savings but the emphasis must now shift to meeting the demands that distribution networks are now facing. EME has supported regulatory initiatives intended to align investment more closely with performance under the Information and Incentives project, but this is still limited to relatively short time horizons.

19 EME has raised with Ofgem the need to maintain adequate levels of investment to maintain the robustness of the network. Our particular concerns are that:

- necessary network investment is being deferred. EME's requirement for non-load related capital expenditure was cut by about £34m annually over the five year period of DR3 and has in effect been deferred, creating a bow wave of needed expenditure in future;
- price controls give too much emphasis to short-term performance targets and discourage the investment needed to sustain performance improvement in the long term;
- investment and policy priorities are unclear.

20 As a result of the accumulating backlog of investment and the increasing average age of assets, the network is becoming more prone to failure and less robust to damage from storms and floods. Networks are becoming less rather than more capable of coping with increased embedded generation and the more active system operational role that distributors will progressively need to take if the Government's targets are realised and then extended. In the short to medium term, we are concerned that the Government's targets for renewable and CHP embedded generation, and the Government's electricity safety quality and continuity regulations, are inconsistent with Ofgem's framework of lowest cost regulation.

21 The Government, Ofgem and the industry need to work together to deliver a broad strategic framework for electricity distribution which:

- continues to focus on distribution company efficiency and effectiveness;
- encourages better risk evaluation and adequate network capital expenditure over longer time scales;
- facilitates the Government's embedded generation objectives;
- lays the foundation for a more active operational role for distributors given the extension of embedded generation;
- provides distribution companies with incentives to commit the investment needed to enable them to manage networks more actively and facilitate the delivery of Government energy policy objectives, whilst maintaining the drivers for innovation that RPI-X incentive based regulation has delivered.

International Links

22 Increased interconnection with EU electricity networks may also address supply diversity but may also undermine it. Further investment will depend on the scale of arbitrage opportunities between markets. Its effectiveness as a contribution to UK supply security will depend on other countries having surplus generating capacity when the UK needs it. This surplus capacity would also need to be fuelled from a different source to the capacity in the UK. The availability of links with adjoining electricity markets was not sufficient to maintain adequate supply security in California and indeed over-reliance on external power sources and inadequate investment within California were a major contributor to current problems.

Lessons from Other Countries

23 We believe there are lessons to be learned from network regulation in other countries and from other industries within the UK. For example, following the Hatfield accident, we noted that the rail regulator indicated that, in the absence of other information, age should be used as an indicator of fitness of the asset for purpose, and that Railtrack have now been allowed to spend an extra £2 billion to resolve weaknesses in the infrastructure. Using similar age data EME did suggest in the last Distribution Price Review a significant additional investment to increase the robustness of the network asset but Ofgem did not sanction this expenditure. The disruption to supplies in Auckland in 1998 demonstrates the economic risk to the community we serve, and in particular raises the issue of the risk of a strategic business area being without supply for a long period of time. One of the manifestations of our Auckland review is the annual production of a comprehensive plant status review.

24 Network access and trading arrangements clearly cannot be totally technology blind. In the absence of clear guidance Ofgem have pursued a lowest cost economic regulation paradigm. With the need to incorporate a wider range of objectives this approach would not appear to be appropriate in the future. We believe that independent expert guidance may well be appropriate and that this could be provided by a Strategic Energy Authority as part of or with strong links to the DTI. The relative lack of success of this model in rail to date reflects implementation rather than inherent weakness.

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